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## Teachers' professional learning goals in relation to teaching experience\*

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### ABSTRACT

In this study, we explored the relationships between teachers' self-articulated professional learning goals and their teaching experience. Although those relationships seem self-evident, in programmes for teachers' professional development years of teaching experience are hardly taken into account. Sixteen teachers with varying years of experience and subjects were interviewed. The results show different learning goals, related to communication and organisation, curriculum and instruction, innovation, responsibilities, and themselves as professional. Various relationships between learning goals and teaching experience emerged, which clearly reflect the development from early- to mid- and late-career teachers. Issues related to curriculum and instruction appeared to be learning goals for early- and mid-career teachers. This implies that regardless of increasing teaching expertise, curriculum and instruction remain central to teachers' continuous learning. Late-career teachers were interested in learning about extra-curricular tasks and innovations. Models of professional life phases have been used to interpret these results.

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### KEYWORDS

Professional development; school-based teacher education; secondary school teachers; teacher development

## Introduction

Teachers are expected to develop professionally throughout their career, due to constant changes in teachers' everyday contexts and changing policies and innovations in the field of education (Knight 2002). This development is referred to as *lifelong learning* or *continuous professional development* (CPD), and is considered a crucial factor for improving teacher quality, schools, and teachers' impact on student learning (Day et al. 2007; Opfer and Pedder 2011). A point of criticism with programmes for teacher development is that teachers themselves are not involved in choosing the content (Van Veen, Zwart, and Meirink 2012). As a consequence, these programmes often do not fit teachers' own learning goals, nor their specific needs when it comes to their own development (Opfer and Pedder 2011; Czerniawski

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2013). Subsequently, teachers often experience CPD initiatives as 'next to useless' (Webster-Wright 2009, 725), whenever an initiative is misaligned with their particular professional learning goals and irrelevant to their classroom practice (Webster-Wright 2009; Little 2012). However, there have been relatively few empirical studies aimed at understanding in-service teachers' professional learning goals from a teacher's point of view.

At the same time, a common problem with programmes for teacher development is that they are designed in line with current school demands and trends, rather than based on a coherent and well-considered learning course for teachers for a longer period of time (Borko, Jacobs, and Koellner 2010; Little 2012; Van Veen, Zwart, and Meirink 2012). Neither are these programmes geared to teachers' years of teaching experience, and they are not designed to build on teachers' previous experiences (Fessler and Rice 2010). All teachers are treated more or less as if they are on the same level and have similar learning goals. Due to different knowledge levels and professional preferences, teachers can be expected to have different learning goals at different moments in their career. Teachers' CPD could benefit from a learner-centred approach building on teachers' needs, problems in practice, and the teaching experience already acquired.

Recently, studies have pointed to the importance of addressing teachers as active agents in educational change efforts (Hoban 2002; Czerniawski 2013) and as directing their own CPD (Lohman and Woolf 2001). A necessary condition for teachers to be self-directed learners is that they diagnose and become aware of their learning goals first (Janssen et al. 2012). For a better connection with teachers' learning needs it is of interest to study what teachers formulate as their professional learning goals and how this relates to teaching experience. This consideration has resulted in the following research question: *What is the relationship between secondary school teachers' professional learning goals and their years of teaching experience?*

This question is especially relevant in a national context of professional development where teachers are provided with a lot of autonomy to design their own CPD. The Netherlands is a good example of such a CPD context, as Dutch secondary schools do not have a strong culture of performance evaluation of teachers, nor is there a mandatory national system of continuous evaluation or re-accreditation for teachers. Furthermore, the Dutch context is characterised by great variation in the extent to which teachers engage in CPD (Bakkenes, Vermunt, and Wubbels 2010; de Vries, Jansen, and van de Grift 2013).

### **Teachers' professional learning**

In many studies on teacher learning the learning outcomes or learning activities within a specific educational reform or CPD context are examined (Bakkenes, Vermunt, and Wubbels 2010). However, teachers also learn when they engage in and learn from everyday classroom practice (continuous experiential learning) (cf. Meirink et al. 2009; Czerniawski 2013), when they collaborate with colleagues (Kennedy 2011; Little 2012) and from being part of a school system and its change processes (Hoban 2002). To understand teachers' professional learning goals as they emerge from their daily professional life and within their workplace setting, a situated enquiry is needed (Webster-Wright 2009). A situated perspective on teacher learning shows that teachers' everyday thinking and acting is intertwined with the particular context they are in since '(T)he classroom is a powerful environment for shaping and constraining how practicing teachers think and act' (Putnam and Borko 2000, 6). This workplace setting is a place where teacher learning commonly begins. However, it is up to the teachers how they choose

to engage in learning from the learning opportunities that the workplace affords (Admiraal et al. 2016). Given this setting, we asked teachers about their experiences of professional learning and their current learning goals, which we will here refer to as *teachers' professional learning goals* (sometimes abbreviated to 'learning goals') (Webster-Wright 2009; Opfer and Pedder 2011). A learning goal is defined as a *teacher's desired change in behaviour or cognition* (Fenstermacher 1994; Putnam and Borko 2000; Bakkenes, Vermunt, and Wubbels 2010), where cognition is understood as 'the integrated whole of theoretical and practical insights, beliefs, and orientations on part of the individual' (Zwart et al. 2008, 983). Because we approach teacher learning as situated in practice, we think that teachers' learning goals are influenced by both self-perceptions, specific task characteristics of the teaching job, and teachers' perceptions of the context (Tynjälä 2008; Borko, Jacobs, and Koellner 2010; Opfer and Pedder 2011).

Despite the fact that most teacher learning is typically reactive and unplanned (Vermunt and Endedijk 2011), we focused in our study on teachers' intentional learning by asking teachers about their goals for professional learning. Learning goals are easier to make explicit than implicit learning processes (Eraut 2000). Also, because teachers can be considered active agents directing their own development as part of their professional life (Czerniawski 2013), it was a logical step to focus on teachers' intentional learning. It is the only type of learning that can be taken into account in CPD planning (Janssen et al. 2012). Nonetheless, teachers appear to have difficulties defining concrete learning goals for themselves (van Eekelen, Vermunt, and Boshuizen 2006), which could result in methodological challenges when we try to get teachers to formulate learning goals.

### ***Teacher learning related to teaching experience***

Findings from previous studies indicate that as experiential knowledge and skills increase, participation in professional learning or the motivation for learning decrease as teachers become more experienced (Day et al. 2007; Richter et al. 2011). Seen from a cognitive perspective, the expertise literature positions teachers as developing from novice, via advanced beginner and intermediate, towards expert teacher. For every stage, different knowledge structures are distinguished, going from rule-driven, disorganised and exemplary knowledge (novice) to an integrated, holistic, intuitive and situated knowledge base (expert) (Berliner 2001). As a consequence, novice and expert teachers can be expected to differ in what they want to learn, why, and how.

Day et al. (2007) and Fessler and Rice (2010) have criticised earlier models of teacher development (e.g. Fuller 1969) describing teachers' careers in fixed and linear stages, emphasising pre-service, induction and maturity phases. As an alternative, they suggest professional life phases which represent '[...] sequential stages that mirrored the timeline of teachers' experiences' (Fessler and Rice 2010, 582) and can be distinguished by years of teaching experience. Most recently, Day et al. (2007) have shown that every phase can be characterised by different themes that are relevant to most teachers in the same phases of their careers. For example, Day's et al. (2007) first two phases (0–7 years of experience) include themes labelled Commitment [1] and Identity and Efficacy [2]; the third phase (8–15 years of experience) is called Managing changes in role and identity [3]; and the later phases (>16 years of experience) are all related to Challenges to motivation and commitment [4, 5, 6].

The frameworks of professional life phases can provide insight into the variations in learning goals teachers formulate for themselves. In this study, we combined different models of

professional life phases (Fessler and Christensen 1992; Huberman 1993; Day et al. 2007) and used these in interpreting our results. Also, the themes from professional life phases and existing teacher knowledge structures (cf. Shulman 1986) were used to code the content of teachers' learning goals in the data analysis. What teachers know and are able to do has frequently been discussed by referring to a teacher's knowledge base (Shulman 1986; Verloop, Van Driel, and Meijer 2001), distinguishing teachers' knowledge of content, classroom management, pedagogies, instructional strategies, curriculum and students' learning. A teacher's knowledge base does not tell us what teachers themselves formulate as learning needs, but the idea is useful in distinguishing between domains of teachers' learning goals.

### ***What do teachers learn in their career?***

Teachers seem to differ in what they learn throughout their career. All the professional life phase models distinguish an induction phase that characterises the entrance of teachers into the profession and socialisation in the teaching job. After teachers have become established in the profession comes a mid-career phase. The different mid-career phases have in common that teachers are becoming settled in their careers, committing themselves to teaching and trying to improve their effectiveness. Finally, the late-career phases are characterised by lessened commitment to school (Rolls and Plauborg 2009).

As teachers grow older so do the challenges of maintaining energy for the complex and persistently challenging work of teaching children and young people whose attitudes, motivations and behaviour may differ widely from those with whom they began their careers. (Day and Gu 2009, 442)

Feiman-Nemser (2001) introduced a teacher learning continuum in which early career teachers' learning tasks are mainly related to content knowledge, students' characteristics, classroom management, and their own professional identity as a teacher (Feiman-Nemser 2001). Later in their careers teachers focus more on extending subject matter knowledge, refining their repertoire, strengthening skills to improve teaching and expanding responsibilities in the school (Feiman-Nemser 2001). Although Feiman-Nemser based her continuum on the literature and her experiences as teacher educator, she did not explore what teachers themselves declare to be central learning goals related to their specific career phase.

Previous research on the content of teachers' learning is predominantly focused on what teachers *should* or *need* to learn, not on what teachers *want* to learn (Opfer and Pedder 2011; Czerniawski 2013; Admiraal et al. 2016). Our study seeks to add to the teacher learning debate by focusing on how teachers formulate their own learning goals. In short, international studies (e.g. Fessler and Christensen 1992; Huberman 1993; Day et al. 2007) show that there could be a meaningful relation between teachers' professional learning and teaching experience, but this has not been studied extensively, and a focus on teachers' own professional learning goals is conspicuously lacking.

## **Method**

### ***Research approach and sample***

To study teachers' learning goals as they emerge from classroom practice, a research design close to the context of teacher learning is needed (Putnam and Borko 2000; Webster-Wright

**Table 1.** Characteristics of teacher sample.

Characteristics	N
Men	8
Women	8
Years of experience <sup>a</sup>	
0–7	5
8–19	5
20–35	6
Subject domain	
Language	5
Science	5
Social studies	5
Other	1
Teaching certification	
University degree	11
Non-university degree	4
No teaching certificate (yet)	1

<sup>a</sup>This experience range was the result from combining the professional life phases of Day et al. (2007), Fessler and Christensen (1992), and Huberman (1993), to arrive at three broad categories that reflected teachers’ development.

2009). We therefore opted for an in-depth, small-scale interview study in one secondary school.

The first author interviewed 16 teachers from a secondary school in the Netherlands with approximately 1200 students, located in an urban area. This particular secondary school offers education for five or six years, preparing students for vocational and university education, respectively. Next to regular classes, the school offers bilingual classes, with more than half of the subjects being taught in English and graduates having the opportunity to take the International Baccalaureate Exam for English. The school is divided into teams corresponding to the school years and the different educational levels (vocational/academic/bilingual), and teachers work together in small and large subject-based departments (e.g. language, science and social science). The majority of teachers have obtained a teaching degree from a university teacher education programme and a minority has attended a one-to four-year professional teacher education programme. The school offers teachers the opportunity to spend 10 per cent of their job appointment on CPD (i.e. 165 h per year), time filled partly with required school-based professional development activities, and partly with CPD activities chosen by the teachers themselves. There is no explicit professional development plan in the school. The school’s management decides each year what the required school-based CPD activities will be. These are related to the latest developments in education. Recently, a workshop had been held on using technological innovations in the classroom to get students more involved. Moreover, the school was also investing in an induction programme for beginning teachers, and 10 experienced teachers had started a coaching course.

Prior to the interviews, the first author spent two months at the school in order to learn about contextual factors that could influence teacher learning. This period consisted of 60 classroom visits involving 30 teachers, and informal conversations with staff. From the teachers observed, 16 were selected for interviews, a selection first of all based on variation in years of teaching experience, and secondly variation in subject and gender (see Table 1). The first author invited these selected teachers personally for interviews.

**Table 2.** Interview questions to elicit teachers' professional learning goals.

Perspective on teacher learning	Perspective derived from:	Example interview question
Past learning	Narrative-biographical approach, critical learning experiences, cf. Kelchtermans, Huberman	<i>If you look back on how you have learned to become a teacher, what were the most important things you have learned in the past and how have you accomplished these?</i>
Day-to-day learning	Practical knowledge: building expertise through classroom-based experiences, cf. Putnam & Borko	<i>What do you learn on a daily basis?</i>
Challenges in the workplace	Workplace learning, cf. Tynjälä	<i>Do you experience challenges in your job? And if yes, what do you want to learn from them?</i>
Learning wishes	Concerns, cf. Fuller, Hoekstra et al. Will to learn, cf. van Eekelen Continuous professional development, cf. Kennedy, Janssen	<i>(If there were no restrictions whatsoever...) What do you want to develop/learn?</i>
Recent learning	Continuous professional development, cf. Kennedy	<i>What have you learnt from the most recent learning activity you undertook in the school?</i>
School-based learning	School-based professional development, learning communities, PD policies and practices, cf. Admiraal et al.	<i>What learning opportunities are there in your school, and how much do you wish to use these opportunities?</i>
Future learning	Career-oriented learning, cf. Huberman, Day	<i>How do you see yourself as a teacher in 5 - 10 years?</i>

## Instruments

Teachers do not regularly talk to others about their learning process, let alone their goals in furthering this process (Janssen et al. 2012). To study teachers' learning goals, we designed interview questions from various perspectives intended to invite teachers to talk about their own learning (see Table 2). The combination of questions stimulated teachers to discuss such things as their concerns, critical learning experiences, recent learning activities, feelings of mastery, and their aims and long-term plans (Kelchtermans 1993; Lohman and Woolf 2001; Hoekstra et al. 2007; Janssen et al. 2012). Using such a multi-perspective approach in our interviews, we invited teachers to talk about the topics that mattered most for their current learning. From the various perspectives and the follow up-questions, we were able to distill these teachers' (core) professional learning goals.

## Procedure

All selected teachers were invited personally and agreed to participate. The interviews were semi-structured. After the interviews (approximately 75 min) had been conducted and transcribed verbatim, the teachers received the transcript of their interview to check whether they agreed with the text. In response to this member check, only two of the teachers suggested minor changes to the transcript.

## Analysis

In order to develop a coding instrument to analyse teachers' learning goals, we created a list of labels derived from open coding the interview transcripts (Miles, Huberman, and Saldaña 2013). Thereafter, we compared these labels with existing frameworks on teachers'



**Table 3.** Codes and definitions for domains of teachers' professional learning goals.

Code	Domain of learning goal	Definition
1	Communication and classroom organisation	Goals that deal with classroom rules, structure during the lessons, and classroom management; creating a safe learning environment; creating good teacher-student relationships. (cf. Shulman 1986)
2	Instruction and curriculum	Goals related to improving subject-related teaching strategies with regard to knowledge of (a) instruction (b) students' learning (c) curriculum (d) assessment (e) subject content (cf. Shulman 1986; Magnusson, Krajcik, and Borko 1999)
3	Socialisation	Goals related to how teachers (intend to) socialise themselves within their school environment and with regard to their colleagues/management
4	Technological innovation	Goals triggered by working with (technological) innovations inside or outside the classroom which challenge the teacher and are often described as 'something new'
5	Extra-curricular tasks	Goals related to a particular non-teaching task of the teacher, or a specific position teachers fulfil in the school
6	Teacher as professional	Goals related to problems teachers encounter while executing their job, and which affect their 'professional behaviour'

knowledge structures (Shulman 1986; Magnusson, Krajcik, and Borko 1999; Van Driel and Berry 2010). We started our analysis using two transcripts to create a list of labels through open coding and we compared these labels with knowledge structures that teachers 'should' develop during their career to synchronise the labels with the wording of learning domains from existing frameworks. This resulted in five learning domains. We chose to combine open coding with theory-driven methods to draw on the vast amount of literature on teacher learning and thus increase the recognisability of our coding categories. This made our final categorisation system a result from both data-driven and theory-driven approaches (see Table 3). After a first round of coding, a sixth learning domain, 'teacher as professional', was added because this particular domain addresses specific non-curriculum-related issues that could not be coded in the other five domains.

In this study, we define learning goals as *teacher's desired change in behaviour or cognition*. Sometimes teachers' learning goals were not specifically articulated as a goal but as an experienced deficit needing attention, as a concern in current practice, and as expected learning concerning a new task in the school. What these examples all have in common is that teachers explicate a wish to change something in their behaviour or cognition, and that is why they were addressed as learning goals.

To analyse teachers' learning goals a data reduction of the interview transcripts was necessary to be able to derive teachers' core learning goals; to this end, first a summary of each interview was made by the first author. The summaries served as an intermediate step prior to selecting learning goals and coding. They included all relevant ideas concerning teachers' learning and had the following structure: (a) a short introduction to the main concerns playing a role in the teacher's professional life (illustrated by teachers' quotes to retain teachers' voice), and (b) the teacher's responses to the specific interview questions (illustrated by quotes). To check validity, the third author randomly selected two summaries and compared the summary with the original interview transcript. No changes to the summaries were necessary.



Secondly, both first and third authors extracted key sentences from the summaries that represented teachers' learning goals. Subsequently, they coded these key sentences independently from each other, which resulted in learning goals receiving a code from Table 3. Next, selected key sentences and codes were compared, disagreements were discussed, and adaptations made. As a final step in the analyses of teachers' learning related to teaching experience, we organised the learning goals according to the different learning domains and explored whether teachers with different backgrounds in teaching experience addressed their learning goals differently (Miles, Huberman, and Saldaña 2013). Therefore, we divided teaching experience into three broad categories, namely early career (0–7 years), mid career (8–19 years) and late career (20+ years). With these categories we wanted to examine whether there were similarities and differences in learning goals across early-, mid- and late-career teachers.

## Results

An overview of the different domains of professional learning goals relating to varying levels of teaching experience is presented in Table 4. The average number of learning goals per experience range was highest for early career teachers, and lower for mid- and late-career teachers. It was only early career teachers who formulated learning goals in terms of communication and classroom organisation, whereas learning goals pertaining to curriculum and instruction were formulated by all teachers across the sample, although mostly by early career teachers. Learning about technological innovations in the classroom and learning related to extracurricular tasks were typical of mid- and late-career teachers. Learning about yourself as a professional was mentioned only by early- and mid-career teachers.

In the following, we will discuss each learning domain in depth to illustrate how teachers articulated their learning goals. Also, we discuss each learning domain in relation to

**Table 4.** Frequencies and means of teachers' learning goals related to teaching experience.

	Years of Experience						Total	
	Early 0–7		Mid 8–19		Late <sup>a</sup> 20+			
	(n = 5)		(n = 5)		(n = 6)		(n = 16)	
Domains of learning goals	<i>f</i>	<i>m</i>	<i>f</i>	<i>m</i>	<i>f</i>	<i>m</i>	<i>f</i>	<i>m</i>
1. Communication and classroom organisation	6	1.20	0	0.00	0	0.00	6	0.37
2. Instruction and curriculum	11	2.20	7	1.40	1	0.17	19	1.19
• Instructional strategies <sup>a</sup>	5	1.00	4	0.80	1	0.17	10	0.63
• Students' learning process	2	0.40	0	0.00	0	0.00	2	0.13
• Curriculum development	2	0.40	2	0.40	0	0.00	4	0.25
• Designing assessments	2	0.40	0	0.00	0	0.00	2	0.13
• Content knowledge	1	0.20	1	0.20	0	0.00	2	0.13
3. Socialisation	1	0.20	0	0.00	0	0.00	1	0.06
4. Technological innovation	0	0.00	1	0.20	3	0.50	4	0.25
5. Extra-curricular tasks	0	0.00	4	0.80	1	0.17	5	0.31
6. Teacher as professional	3	0.60	4	0.80	0	0.00	7	0.44
No explicit learning goal	0	0.00	0	0.00	2	0.33	2	0.13
Total goals	21	4.20	16	3.20	5 <sup>b</sup>	0.83	42 <sup>b</sup>	2.62

<sup>a</sup>Subcategories of Instruction and curriculum. The italic numbers represent the coding frequency of this particular subcategory.

<sup>b</sup>The teachers with no explicit learning goal were not included in the sum of goals.

individual teachers, taking their years of teaching experience into account (see Appendix A for an overview of each teacher's learning goals).

### ***No explicit learning goals***

Two teachers were not explicit about their learning goals: Paul [20]<sup>1</sup> and Bernard [34] did not intend to learn new things and as a consequence could not indicate specific learning goals. For Bernard, for example, it was clear that there were no learning goals for him any longer because his students were satisfied and their exam results good:

If students think that all goes well, then I don't have the idea that I necessarily have to change anything. (Bernard, [34])

### ***Communication and organisation***

Goals related to communication and organisation, such as lesson structure, interacting with students, showing authority and classroom management in general, were formulated by four early career teachers and one mid-career teacher. Barbara [2] and Ryan [2] talked about lesson structure. For them, it was important to learn about structuring the lessons so that classroom time is spent efficiently.

Well I'm still working on effective and efficient. You know, I could be far more efficient with the time I have if I was far more structured, and I gave homework every day and I checked the homework and I had that kind of stuff you know. (Barbara [2])

Sara [4] and Duncan [<1] were concerned with classroom management. For them, it was important to be perceived as an authority by their students.

Or at least that [the students] have the impression 'oh, he is somebody, and he wants me to keep my mouth shut and pay attention, or else ...', whatever that 'else' might be, but at least that they have the idea that they have to pay attention. And that is something that can definitely be improved, yeah. (Duncan [<1])

### ***Instruction and curriculum***

Goals related to instruction and curriculum were formulated primarily by early- and mid-career teachers. With the early career teachers, the goals were formulated as mastering skills for good instruction. With teachers with more than eight years' experience, the goals were more often formulated in terms of their day-to-day learning, for example, slightly adapting instructions as a consequence of anticipating student mistakes made the previous day. We categorised this day-to-day learning only as a learning goal if it was the teacher's intention to change behaviour. To understand this frequently mentioned learning domain better, we made subcategories based on a framework of Pedagogical Content Knowledge (PCK; Magnusson, Krajcik, and Borko 1999). In the following, each subcategory will be discussed separately.

### ***Instructional strategies***

For 10 teachers it appeared important to adapt their teaching to students' needs and to vary their instructional strategies. For Ryan [2], it was important to broaden his repertoire of

instructional strategies, because he felt that he did not master enough ways of explaining scientific concepts to his students:

Bending down to the student, that is really difficult for me in case of my 15-year-old students, but I hardly have lesson materials, I have been given hardly any tools to explain at that level. Sometimes my language is too difficult [for them], sometimes my language is too abstract, whereas they just want really concrete explanations. (Ryan [2])

For late career teacher Patricia it was something she learns about on a daily basis, because she adapts her lessons instantly if she experiences problems with instruction.

I have parallel classes and even after 27 years, you sometimes make wrong estimations, because I think, this is really easy and then it turns out not to be and then I can adapt it in the next class. (Patricia, [27])

Two early career teachers (Sara [4] and Barbara [4]) mentioned activating students during instruction as an important way to get students more involved in their lessons and to let them produce spoken or written language and generate questions about the content of their subject.

During the teacher education program I've created my own rule of thumb which is 'let them do the work' and that's something that I'm still working on, that I want to use more activating instructional strategies in my classes, because I think that students learn most in this way; you learn a language by using it. (Sara, [4])

### *Students' learning process*

Two early career teachers (Duncan [<1] and Barbara [2]) wanted to know more about how their students are learning their subjects and how as a teacher you can tap into that learning process.

Because I know how I see it, but I see it as, you know, as a financial economist that has been years and years in the field, so, but also as a mother and a citizen and you know. But they are not mothers and citizens yet and they're not financial economists yet. So, they experience it in a really different way. And so I'm building on getting in touch with how they experience economics. (Barbara [2])

### *Curriculum development*

Four early- and mid-career teachers (Sara [4], Susan [4], Richard [18] and Courtney [10]) wanted to learn how to design curricula that connect the different year levels of their respective school subjects.

I've been appointed to adapt that curriculum to the new standards issued by the ministry, and I can see growth in that and that also connects directly with the content of the lessons (Richard [18])

### *Designing assessments*

Two early career teachers (Susan [4] and Sara [4]) were concerned with how to properly design assessments to assess particular skills their students need to master.

but fluency, for example, that is really the biggest challenge of all language skills, certainly in such a big class. I can't let them all present, because I then lose 15 lessons, you see, that kind of problem (Susan [4])

### ***Content knowledge***

Two teachers indicated they wanted to learn about the content of their subject. Either because they felt insecure teaching content in which they have less expertise (Sara, [4]), or because they thought it is necessary to dive deeper into the content to enliven their lessons (Richard, [18]).

### ***Socialisation***

Goals concerning socialisation as a teacher in the school context were only mentioned by one teacher, namely Duncan [<1] who had been working at this school for less than a year. For him, it was important to learn the often implicit school rules.

Those are things like how it goes in schools, maybe a little bit more about rules in school. Rules that I'm not aware of but the students are. (Duncan [<1])

### ***Technological innovation***

Goals relating to innovation were all related to the technological applications that were a topic of discussion in the school at the time of interviewing. The innovation goals were mentioned by mid- and late-career teachers. Three late career teachers (Henry [20], Patricia [27], and Vicky [30]) were hesitant to try out new ways of teaching via technological innovations, and some mentioned they did not feel comfortable using the digital blackboard in their classroom (Patricia [27]). The goals were formulated in terms of 'learning how it works' for late career teachers and 'learn more about it' for mid-career teachers. Early career teachers did not mention this as a learning goal.

### ***Extracurricular tasks***

These kinds of goals were mentioned predominantly by mid-career teachers, and had to do with skills they needed for specific extracurricular tasks they were doing or planning to do.

An extracurricular task frequently mentioned was learning about coaching beginning teachers (Courtney [10], Ronda [12], Richard [18], and Philip [29]). Two teachers (Philip, Ronda) were experienced coaches and stated they were still learning a lot whilst coaching novice teachers (e.g. about their own teaching), whilst two mid-career teachers (Courtney, Richard) were in the middle of a coaching course and wanted to develop their coaching skills further by improving their conversation techniques and learn how to adapt their coaching to the developmental needs of beginning teachers.

One mid-career teacher (Gerard [10]) expressed a wish to become a manager in the school. He wanted to climb the career ladder for several reasons: salary increase, more influence in school processes and more variety in his work. To become a manager he has asked for feedback from one of the school leaders, and has requested permission to do a course on school management next year.

### ***Teacher as professional***

These particular learning goals have to do with organising your work better and act more professionally inside and outside the classroom, and were addressed by five early- and

mid-career teachers. One early career teacher, Ryan [2], wanted to learn how to save energy whilst teaching, because he feels really tired after a day full of lessons.

I notice that teaching still takes a lot out of me, I spill a lot of energy. And I say spill because I think that I can achieve the same learning effect with less energy, the same student outcome. (Ryan [2])

Another example is mid-career teacher Gerard [10], who finds he is a bit chaotic in his work and sometimes does half work, so he wants to organise his work better. Anna [12] said she needs to learn to address problems in her work (e.g. heavy workload) in time, by asking colleagues or managers for help. Both Gerard and Anna are aware of their role as professionals in terms of organising their work more effectively.

## Conclusion

Regarding the kinds of learning goals distinguished by teachers, our results have shown that a distinction can be made between learning connected with teaching practice, and learning connected with the school as a workplace. Teachers' learning goals were not aimed solely at improving their own teaching practice, but also at development as a professional (e.g. organising their work load), their additional roles within the school (e.g. coaching beginning teachers), and at issues currently encountered at the school (e.g. the use of technological innovations).

When relating this to teachers' years of experience, we found that after approximately 7 years of teaching learning goals teachers also had broader concerns outside the classroom, and sought new challenges besides the goals related to their teaching practice. For example, mid-career teachers started courses to become licenced coaches for beginning teachers, or they became responsible for curriculum innovation in their school. This is in line with the study by Feiman-Nemser (2001), who found that after sufficient experience with instructional methods, teachers can focus on their active role in the broader school community and look beyond the classroom for new roles and responsibilities (Feiman-Nemser 2001). Adding variation in job tasks is also thought to relate to teachers trying to remain challenged and motivated in their job (Day et al. 2007).

Another result relating to teaching experience was our finding that communication and classroom organisation was a topic mentioned only by novice teachers. The early career teachers in our sample formulated learning goals aimed at classroom instruction and curriculum, classroom organisation and communication, and being a professional teacher. This result is connected with Fuller's (1969) stages of novice teachers' concerns; first teachers focus on themselves, next, they are concerned with their instruction, and even later on, they are concerned with the impact of their teaching on their students. Nonetheless, it appears that the early career teachers in our sample were concerned with all these three topics simultaneously, in a pattern resembling Feiman-Nemser's (2001) central tasks of induction. Thus, novice teachers do not only want to focus on mastering communication with their students, keeping order and managing their classroom, as is frequently suggested in studies on teacher induction, but also on improved curriculum and instruction and growing as professional.

All early- and mid-career teachers we interviewed wanted to learn about curriculum and instruction in relation to the subjects they teach. With regard to literature on teacher expertise development, expert teachers are thought to have more automated teaching repertoire and more distinctive domain-specific knowledge base than novice teachers (Berliner 2001).

In our study, we did not focus on distinguishing experts from experienced teachers, but in our teacher sample most learning goals that remained important for experienced mid-career teachers were related to learning about curriculum and instruction, and more specifically in the subdomain ‘varying instruction to meet students’ needs’. It seems that from the teachers’ perspective it is this type of knowledge (PCK) aimed at increasing student subject understanding which is considered an important learning goal for continuous professional learning (Magnusson, Krajcik, and Borko 1999; Van Driel and Berry 2010). Other teacher knowledge domains, such as ‘communication with students’ and ‘organising classrooms’ might become routinized more easily as teachers’ experience increases.

Learning about curriculum and instruction was not a learning goal for the late career teachers in our sample. Apparently, they do not see a need to formulate learning goals regarding students’ subject understanding and other classroom-related knowledge as these have become automated in their teaching repertoire. At least, it does not require their attention or awareness to learn about this. Rather than learning about classroom practice, they were more interested in learning about technological innovations and extracurricular tasks, since these were demanding issues within their professional lives at the time of interviewing. This also relates to the current issues that the school encountered at the time. The school was exploring the possibilities to integrate technological innovations in classroom; especially the mid- and late-career teachers showed interest in learning about this. Also, there were 4 out of 11 mid- to late-career teachers that formulated ‘coaching novice teachers’ as learning goal. Both technological innovations and coaching novice teachers were topics that were part of the CPD opportunities provided by the school. A selection of mid- to late-career teachers thus chose to adopt school organisational goals in their individual learning goals and used the afforded learning opportunities specific to this school.

In terms of professional life phases as described by Day et al. (2007), Fessler and Christensen (1992), and Huberman (1993) our early career teachers seem to go through a phase of forming their own *identity and efficacy* as a teacher (Day et al. 2007) (cf. Fessler and Christensen’s *competency building* phase), because they were concerned with how to effectively structure lessons and increase their repertoire of instruction methods. In addition, some of our early- and mid-career teachers experienced a phase of *change in role and identity* (Day et al. 2007) because they were searching for new ways to increase the impact on their students, and growing into new roles and responsibilities in the school. For two of our late career teachers the later phase of Day et al. (2007) relating *challenges to motivation and commitment* was applicable, because they did not want to invest in their CPD anymore.

If schools want to organise teachers’ CPD in such a way that teachers’ experience is taken into account, it seems that for early career teachers learning opportunities are required relating to the current concerns they experience in practice. Mid-career teachers could be supported with growth opportunities in curriculum and instruction (especially instructional strategies and curriculum development) and broader responsibilities in their job. Late career teachers seem to prefer learning opportunities about new developments such as technological innovations. More importantly than the differentiated learning opportunities, we found that teachers’ CPD is largely influenced by the local school context and classroom concerns. Therefore, we propose that CPD could best be organised locally and only after considering the diversity of teachers’ learning needs. For school leaders to start realising such learning opportunities adjusted to teachers’ experience, it is important to start by regularly enquiring about individual teacher’s professional learning goals and taking a

long-term view on teachers' learning (van Veen and Kooy 2012). By enquiring after teachers' learning needs, a school leader or other facilitator of teacher learning is better able to support individual teacher learning and provide teachers with opportunities that match their needs.

In general, a school context matters for how CPD opportunities are afforded to teachers depending on the general learning climate in a school (Admiraal et al. 2016). The school context from our study required teachers to take responsibility for their own professional learning because the teachers had to take initiative to enquire after their individual CPD opportunities. This is typical for The Netherlands, as Dutch teachers generally have autonomy to engage in CPD and participation in CPD is voluntary, without being linked to salary or career incentives. Given this particular local context, 14 out of 16 teachers showed to self-direct their professional learning as demonstrated by the way they talked about their CPD. These results provide an argument that teachers' self-directed learning deserves more attention in the literature on teachers' CPD, especially since teachers can be perceived as the main actors to bring about change in their practice (Hoban 2002; Day et al. 2007).

A potential limitation of our study was that we, as researchers, helped teachers to talk about their learning goals, which made teachers not fully self-directive in their statements. We chose this research approach because teachers are not used, and therefore, may find it difficult, to formulate concrete learning goals for themselves. This lack of awareness of their own learning needs would make it difficult for teachers to self-direct their ongoing learning (Janssen et al. 2012). Therefore, the multi-perspective methodology used in the interview questions appeared to be really useful in getting teachers to talk about their own learning needs (see Table 2). Having somebody else close to their current teaching context (e.g. colleague or teacher leader) ask various questions about their learning experiences may help teachers to become more aware of their learning needs and could therefore function as a good starting point for teachers to formulate their learning goals.

Teachers' learning goals suggest a certain goal-directedness in teachers' preferred learning. For some teachers these goals are not explicit, but this does not mean they do not learn. Their learning is fed more by day-to-day improvements, comparable to Eraut's (2000) distinction between reactive and implicit learning. Taking learning goals as a central outcome measure of teachers' learning needs will create the impression that these teachers are not learning and could therefore have limited our results. Therefore, in future research it is advisable not to take learning goals as sole measure of teachers' commitment to learning because teacher learning is closely linked to their everyday practice and to their personal history of learning. When talking about learning, teachers should be able to indicate what matters most in their teaching practice and what were critical learning experiences for them.

## Note

1. Numbers between brackets indicate years of experience, teacher names are pseudonyms.

## Disclosure statement

No potential conflict of interest was reported by the authors.



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## References

- Admiraal, Wilfried, Joke Kruiter, Ditte Lockhorst, Wouter Schenke, Henk Sligte, Ben Smit, Dineke Tigelaar, and Walter de Wit. 2016. "Affordances of Teacher Professional Learning in Secondary Schools." *Studies in Continuing Education* 38 (3): 281–298. doi:10.1080/0158037x.2015.1114469.
- Bakkenes, I., J. D. Vermunt, and T. Wubbels. 2010. "Teacher Learning in the Context of Educational Innovation: Learning Activities and Learning Outcomes of Experienced Teachers." *Learning and Instruction* 20 (6): 533–548. doi:10.1016/j.learninstruc.2009.09.001.
- Berliner, D. C. 2001. "Learning About and Learning from Expert Teachers." *International Journal of Educational Research* 35 (5): 463–482. doi:10.1016/s0883-0355(02)00004-6.
- Borko, H., J. Jacobs, and K. Koellner. 2010. "Contemporary Approaches to Teacher Professional Development." In *International Encyclopedia of Education*, edited by P. Peterson, E. Baker, and B. McGaw, 548–556. Oxford: Elsevier.
- Czerniawski, G. 2013. "Professional Development for Professional Learners: Teachers' Experiences in Norway, Germany and England." *Journal of Education for Teaching* 39 (4): 383–399. doi:10.1080/02607476.2013.769339.
- Day, C., and Q. Gu. 2009. "Veteran Teachers: Commitment, Resilience and Quality Retention." *Teachers and Teaching* 15 (4): 441–457. doi:10.1080/13540600903057211.
- Day, C., P. Sammons, G. Stobart, A. Kington, and Q. Gu. 2007. *Teachers Matter: Connecting Work, Lives and Effectiveness*. London: Open University Press.
- van Eekelen, I. M., J. D. Vermunt, and H. P. A. Boshuizen. 2006. "Exploring Teachers' Will to Learn." *Teaching and Teacher Education* 22 (4): 408–423. doi:10.1016/j.tate.2005.12.001.
- Eraut, M. 2000. "Non-formal Learning and Tacit Knowledge in Professional Work." *British Journal of Educational Psychology* 70 (1): 113–136. doi:10.1348/000709900158001.
- Feiman-Nemser, S. 2001. "From Preparation to Practice: Designing a Continuum to Strengthen and Sustain Teaching." *Teachers College Record* 103 (6): 1013–1055. doi:10.1111/0161-4681.00141.
- Fenstermacher, G. D. 1994. "The Knower and the Known – The Nature of Knowledge in Research on Teaching." *Review of Research in Education* 20: 3–56. doi:10.3102/0091732x020001003.
- Fessler, R., and J. C. Christensen. 1992. *The Teacher Career Cycle: Understanding and Guiding the Professional Development of Teachers*. Needham heights, MA: Allyn & Bacon.
- Fessler, R., and E. Rice. 2010. "Teachers Career Stages and Professional Development." In *International Encyclopedia of Education*, edited by P. Peterson, E. Baker, and B. McGaw, 582–586. Oxford: Elsevier.

- Fuller, F. F. 1969. "Concerns of Teachers: A Developmental Conceptualization." *American Educational Research Journal* 6 (2): 207–226. doi:[10.3102/00028312006002207](https://doi.org/10.3102/00028312006002207).
- Hoban, G. F. 2002. *Teacher Learning for Educational Change*. Buckingham: Open University Press.
- Hoekstra, A., D. Beijaard, M. Brekelmans, and F. Korthagen. 2007. "Experienced Teachers' Informal Learning from Classroom Teaching." *Teachers and Teaching: Theory and Practice* 13 (2): 191–208. doi:[10.1080/13540600601152546](https://doi.org/10.1080/13540600601152546).
- Huberman, M. 1993. *The Lives of Teachers*. Translated by J. Neufeld. New York: Teacher College Press.
- Janssen, S., K. Kreijns, T. Bastiaens, S. Stijnen, and M. Vermeulen. 2012. "Teachers' Professional Development: An Analysis of the Use of Professional Development Plans in a Dutch school." *Professional Development in Education* 38 (3): 453–469. doi:[10.1080/19415257.2011.635307](https://doi.org/10.1080/19415257.2011.635307).
- Kelchtermans, G. 1993. "Getting the Story, Understanding the Lives: From Career Stories to teachers' Professional Development." *Teaching and Teacher Education* 9 (5–6): 443–456. doi:[10.1016/0742-051x\(93\)90029-G](https://doi.org/10.1016/0742-051x(93)90029-G).
- Kennedy, Aileen. 2011. "Collaborative Continuing Professional Development (CPD) for Teachers in Scotland: Aspirations, Opportunities and Barriers." *European Journal of Teacher Education* 34 (1): 25–41. doi:[10.1080/02619768.2010.534980](https://doi.org/10.1080/02619768.2010.534980).
- Knight, P. 2002. "A Systemic Approach to Professional Development: Learning as Practice." *Teaching and Teacher Education* 18 (3): 229–241. doi:[10.1016/S0742-051x\(01\)00066-X](https://doi.org/10.1016/S0742-051x(01)00066-X).
- Little, J. W. 2012. "Professional Community and Professional Development in the Learning-centered School." In *Teacher Learning That Matters: International Perspectives*, edited by M. Kooy and K. van Veen, 22–43. London: Routledge.
- Lohman, M., and N. Woolf. 2001. "Self-initiated Learning Activities of Experienced Public School Teachers: Methods, Sources, and Relevant Organizational Influences." *Teachers and Teaching: Theory and Practice* 7 (1): 59–74. doi:[10.1080/13540600123835](https://doi.org/10.1080/13540600123835).
- Magnusson, S., J. S. Krajcik, and H. Borko. 1999. "Nature, Sources and Development of Pedagogical Content Knowledge." In *Examining Pedagogical Content Knowledge*, edited by J. Gess-Newsome and N. G. Lederman, 95–132. Dordrecht: Kluwer Academic.
- Meirink, Jacobiene A., Paulien C. Meijer, Nico Verloop, and Theo C. M. Bergen. 2009. "How Do Teachers Learn in the Workplace? An Examination of Teacher Learning Activities." *European Journal of Teacher Education* 32 (3): 209–224. doi:[10.1080/02619760802624096](https://doi.org/10.1080/02619760802624096).
- Miles, M. B., M. Huberman, and J. Saldaña. 2013. *Qualitative Data Analysis: A Methods Sourcebook*. Thousand Oaks, CA: SAGE.
- Opfer, V. D., and D. Pedder. 2011. "Conceptualizing Teacher Professional Learning." *Review of Educational Research* 81 (3): 376–407. doi:[10.3102/0034654311413609](https://doi.org/10.3102/0034654311413609).
- Putnam, R. T., and H. Borko. 2000. "What Do New Views of Knowledge and Thinking Have to Say About Research on Teacher Learning?" *Educational Researcher* 29 (1): 4–15. doi:[10.3102/0013189x029001004](https://doi.org/10.3102/0013189x029001004).
- Rolls, S., and H. Plauborg. 2009. "Teachers' Career Trajectories: An Examination of Research." In *Teachers' Career Trajectories and Work Lives*, edited by M. Bayer, U. Brinkkjær, H. Plauborg, and S. Rolls, 9–28. Dordrecht: Springer.
- Shulman, L. S. 1986. "Those Who Understand: Knowledge Growth in Teaching." *Educational Researcher* 15 (2): 4–14. doi:[10.3102/0013189X015002004](https://doi.org/10.3102/0013189X015002004).
- Tynjälä, Päivi. 2008. "Perspectives into Learning at the Workplace." *Educational Research Review* 3 (2): 130–154. doi:[10.1016/j.edurev.2007.12.001](https://doi.org/10.1016/j.edurev.2007.12.001).
- Van Driel, J., and A. Berry. 2010. "Pedagogical Content Knowledge." In *International Encyclopedia of Education*, edited by P. Peterson, E. Baker, and B. McGaw, 656–661. Oxford: Elsevier.
- Van Veen, K., R. Zwart, and J. Meirink. 2012. "What Makes Teacher Professional Development Effective? A Literature Review." In *Teacher learning that matters: International perspectives*, edited by M. Kooy and K. Van Veen, 3–21. London: Routledge.
- van Veen, K., and M. Kooy. 2012. "Stepping Back and Stepping In: Concluding Thoughts on the Landscapes of Teacher Learning that Matters." In *Teacher Learning That Matters: International Perspectives*, edited by M. Kooy and K. Van Veen, 255–260. New York: Routledge.
- Verloop, N., J. Van Driel, and P. C. Meijer. 2001. "Teacher Knowledge and the Knowledge Base of Teaching." *International Journal of Educational Research* 35: 441–461.

- Vermunt, J. D., and M. D. Endedijk. 2011. "Patterns in Teacher Learning in Different Phases of the Professional Career." *Learning and Individual Differences* 21 (3): 294–302. doi:[10.1016/j.lindif.2010.11.019](https://doi.org/10.1016/j.lindif.2010.11.019).
- de Vries, Siebrich, Ellen P. W. A. Jansen, and Wim J. C. M. van de Grift. 2013. "Profiling Teachers' Continuing Professional Development and the Relation with Their Beliefs About Learning and Teaching." *Teaching and Teacher Education* 33: 78–89. doi:[10.1016/j.tate.2013.02.006](https://doi.org/10.1016/j.tate.2013.02.006).
- Webster-Wright, A. 2009. "Reframing Professional Development Through Understanding Authentic Professional Learning." *Review of Educational Research* 79 (2): 702–739. doi:[10.3102/0034654308330970](https://doi.org/10.3102/0034654308330970).
- Zwart, R. C., Th Wubbels, S. Bolhuis, and Th C. M. Bergen. 2008. "Teacher Learning Through Reciprocal Peer Coaching: An Analysis of Activity Sequences." *Teaching and Teacher Education* 24 (4): 982–1002. doi:[10.1016/j.tate.2007.11.003](https://doi.org/10.1016/j.tate.2007.11.003).

## Appendix A. Professional learning goals per teacher related to teaching experience

Early career 0–6 years	1*	Duncan (0.5) <sup>a</sup>	6	Ryan (2)	1	Barbara (2)	
		Classroom management		Saving energy		Structure lesson efficiently	
		2	Differentiate between students	1	Structure during the lesson (transitions)	2	How students experience my subject (Economy)
		2	Varying instruction	2	Increase variety of instructional strategies	2	Activating students (applying knowledge)
	3	Being aware of school rules			1	Flexible in handling own classroom rules	
	2	Susan (4)		Sara (4)			
		Adapt teaching to student level	1	Classroom management			
		2	Developing curriculum and assessing skills	2	Instructional strategies to activate students		
				6	Deal with lack of time		
			2	Assessment of students' skills			
			2	Curriculum development			
Mid career 7–19 years	2	Courtney (10)	6	Gerard (10)	2	Anna (12)	
		Curriculum development and assignments		Organise my work better		Continuously adapting instructional strategies	
		4	Use IT applications	2	Varying teaching methods	6	Asking for help when problems occur
		5	Coaching novice teachers	5	Becoming a manager		
		6	Be a professional				
		2	Innovation in instruction				
	2	Ronda (12)	5	Richard (18)			
		Continue adapting instruction (improvise)		Coaching novice teachers			
		1	Improve interaction with students	2	Deepening content knowledge		
		5	Coaching novice teachers	2	Curriculum development		
	Late career 20+ years	0	Paul (20)	4	Henry (20)	4	Patricia (27)
			No explicit learning goals		Activate students using IT in the classroom		Use more IT in the classroom
		5				2	Continuous adaptation of instruction
			Philip (29)	4	Vicky (30)		Bernard (34)
Developing as coach for novice teachers				Use IT (social media/ games)	0	No explicit learning goals	

Note: Under each name the core learning goals of this particular teacher are summarised.

<sup>a</sup>Names are pseudonyms, numbers are exact years of experience.

\*The numbers indicates the domain to which this goal belongs. 1 = communication and classroom organisation, 2 = curriculum and instruction, 3 = socialisation, 4 = innovation, 5 = extracurricular tasks, 6 = teacher as professional.